



# Verify fall arrest systems for the plus-sized worker

**Question:** OSHA standards refer to a 310-pound capacity limit on fall arrest products. What does this mean, and how does a person who weighs more than 310 pounds work safely at height?

*Responding to this month's question is Craig Firl, product manager for Capital Safety, Red Wing, MN.*

**Answer:** The capacity of fall arrest equipment refers to the maximum weight that an individual who is using the products (with clothing, tools and equipment) can weigh. Capacity should not be confused with the overall strength of a fall arrest system. For example, a typical anchorage point for a fall arrest system will support 5,000 pounds per person attached to the system. An important thing to remember is the capacity of this system is not 5,000 pounds; the capacity is 310 pounds and the anchorage point for the 310-pound (maximum) person falling is 5,000 pounds.

The 5,000-pound anchorage strength may appear to be much more than one would need for a 310-pound person, but it must be understood that the amount of force created by a falling person is significantly more than his or her body weight. Depending on the type of connecting system the person is using, an average person could be exposed to arresting forces approaching 1,800 pounds just from a 6-foot fall.

The standard capacity for fall arrest equipment established by OSHA (29 CFR 1926.502, 29 CFR 1910.66) is 310 pounds. The typical criteria and protocols (static and dynamic testing) established by OSHA supports this 310-pound limit. In other words, the product testing referenced by OSHA verifies that the products will safely arrest someone who weighs up to 310 pounds.

As an option, OSHA does allow for heavier personnel to use fall arrest equipment. Manufacturers of fall arrest products have the option of approving products to a higher capacity. The manufacturer can select what this higher capacity is for their products and perform the

appropriate testing and evaluation to verify the new capacity. For example, several products on the market offer a 420-pound capacity. The offerings include full-body harnesses, energy-absorbing lanyards, self-retracting lifelines and anchorage connectors.

Employers need to verify that the fall arrest product capacity is appropriate for the individual they are trying to protect. The entire fall arrest system must be rated for this new capacity. In other words, along with the body harness, the connecting components like the energy-absorbing lanyard or the self-retracting lanyard also shall be rated accordingly. Finally, the anchorage point must

**Employers need to verify that the fall arrest product capacity is appropriate for the individual they are trying to protect.**

be rated accordingly. If the maximum arresting force for the 420-pound person is higher than the arresting force for a 310-pound person, changes to the anchorage point may be required in order to provide for an acceptable level of safety for that person. To ensure the safety of workers, the employer should ask for maximum arresting force information from the product manufacturer in order to properly set up and maintain the entire fall arrest system.

**S+H**

*Editor's Note: This article represents the independent views of the author and should not be construed as a National Safety Council endorsement.*

**If you're reading this issue of *Safety+Health*...**

You could be earning Continuance of Certification (COC) points from the **Board of Certified Safety Professionals**.

BCSP uses *Safety+Health* editorial content as part of its Online Recertification Quiz Program. For more information, visit [www.bcsp.org](http://www.bcsp.org) and click on "online quizzes."